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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/624,165	07/21/2003	Tiet Pham	100.554US01	6359
34206	7590	12/11/2009	EXAMINER	
FOGG & POWERS LLC			TO, JENNIFER N	
5810 W 78TH STREET				
SUITE 100			ART UNIT	PAPER NUMBER
MINNEAPOLIS, MN 55439			2195	
			NOTIFICATION DATE	DELIVERY MODE
			12/11/2009	ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

DAVID@FOGLAW.COM  
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<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/624,165	PHAM, TIET	
	<b>Examiner</b>	<b>Art Unit</b>	
	JENNIFER N. TO	2195	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

1) Responsive to communication(s) filed on 12 August 2009.  
 2a) This action is **FINAL**.                    2b) This action is non-final.  
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

4) Claim(s) 1-5,8-13,16-21 and 23 is/are pending in the application.  
 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
 5) Claim(s) \_\_\_\_\_ is/are allowed.  
 6) Claim(s) 1-5,8-13,16-21 and 23 is/are rejected.  
 7) Claim(s) \_\_\_\_\_ is/are objected to.  
 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

9) The specification is objected to by the Examiner.  
 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
 a) All    b) Some \* c) None of:  
 1. Certified copies of the priority documents have been received.  
 2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

1) <input type="checkbox"/> Notice of References Cited (PTO-892)	4) <input type="checkbox"/> Interview Summary (PTO-413)
2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)	Paper No(s)/Mail Date. _____ .
3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____ .	5) <input type="checkbox"/> Notice of Informal Patent Application
	6) <input type="checkbox"/> Other: _____ .

## DETAILED ACTION

1. Claims 1-5, 8-13, 16-21 and 23 are pending for examination.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1-2, 5, 8-10, 13, 16-18, and 23 are rejected under 35 U.S.C. 102(e) as being anticipated by Dailey (U.S. Publication No. 2003/0217093).
3. Dailey was cited in the previous office action.
4. As per claim 1, Dailey teaches the invention as claim including a method of scheduling a plurality of periodic events, wherein each periodic event has an associated periodic interval of time and an associated set of services (abstract), the method comprising:

determining when one of the plurality of periodic events occurs (abstract, paragraphs [0005]-[0007], [0024], detecting when one of the periodic event occurs);

determining, for each of the set of services associated with that periodic event if that service is enabled for execution (paragraphs [0028]-[0031], when the periodic event occurs, based on the bit associated with the task, the task manager determining which task is enable/ready for execution); and

distributing the execution of the services associated with that periodic event throughout a next periodic interval of time associated with that periodic event following the occurrence of that periodic event (abstract; figs. 4, paragraph [0034], fig. 4 shown that for each period interrupt, it is associated with a single task, the task for each periodic interrupt should be spread throughout the interval such that it does not occur at the same time. If the periodic interrupt is associated with a plurality of tasks, the plurality of tasks should be spread throughout the interval as well; paragraph [0034]) shown that a trigger can be associated with a set of tasks).

5. As per claim 2, Dailey teaches that wherein one of the periodic events occurs when a periodic interval of time associated with that periodic event elapses (paragraphs [0009], [0024]).

6. As per claim 5, Dailey further teaches configuring at least one set of services associated with that periodic event in a continuous mode in which the service is enable and executed continuously (paragraphs [0028], [0031], [0032], the task manager set the bit variable associated with processing task A, and then perform the task without

interrupt (continuously) and a determination is made to determine whether the task is complete before reset the service variable to move to the next task).

7. As per claim 8, Dailey teaches that wherein distributing the execution of the enabled services includes executing successive enabled services on successive clock ticks following the clock tick on which that periodic event occurred (paragraphs [0027]-[0031]).

8. As per claim 9, it is rejected for the same reason as claim 1 above. In addition, Dailey teaches a tick generator that generates interrupts in response to clock ticks (paragraphs [0007]-[0008], and an interrupt handler that receives the interrupts from the tick generator and executes the periodic event scheduler in response to the interrupt (paragraph [0024]).

9. As per claims 10, 13, 16-18, and 23, they are rejected for the same reason as claims 1-2, 5, 8-9 above.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

10. Claims 3, 11, and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dailey (U.S. Publication No. 2003/0217093).

11. As per claims 3, 11, and 19, Dailey teaches the invention substantially as claimed in claims 1, 9, and 17 above. Dailey did not specifically teach configuring at least one set of services associated with that periodic event in a one-shot mode in which the service is enable for execution one time and then disable.

12. However, Dailey disclosed setting a execution trigger in a service variable at a predetermined time interval, and task manager based on the service variable enable only one task of a set of processing tasks to perform at each interval (paragraphs [0005], [0035], page 5, claim 14).

13. It would have been obvious to one of an ordinary skill in the art at the time the invention was made to have recognized that Dailey indirectly configuring (setting) at least one of set services (one task of a set of processing task) to perform only one time in the predetermined interval is obvious as configuring at least one set of services associated with that periodic event in a one-shot mode in which the service is enable for execution one time of the claimed invention. In addition, since the task only allow to perform one per interval, thus after the interval is reached, it would have been obvious for the task to disable. Therefore, it would have been motivated to one of an ordinary skill in the art at the time the invention was made to use the teaching of Dailey to

distribute periodic task workloads in such a way that allow the system to process other processing work such as real-time tasks (Dailey, paragraph [0009].

14. Claims 4, 12, and 20-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dailey (U.S. Publication No. 2003/0217093), as applied in claims 1, 9, 17 above, and in view of Nakano et al (hereafter Nakano) (U.S. Patent No. 7039012).

15. As per claim 4, Dailey teaches the invention substantially as claimed in claim 1 above. Dailey did not specifically teach configuring at least one set of services associated with that periodic event in a burst mode in which the service is enable for execution a predetermined number of times and then is disable.

16. However, Nakano teaches configuring at least one set of services associated with that periodic event in a burst mode in which the service is enable for execution a predetermined number of times and then is disable (figs. 7-8; col. 13, line 66 through col. 15, line 24; col. 25, lines 20-31, 47-49, setting periodic tasks of the group to run predetermined of times and terminated).

17. It would have been obvious to one of an ordinary skill in the art at the time the invention was made to have included the teaching of configuring at least one set of services associated with that periodic event in a burst mode in which the service is enable for execution a predetermined number of times and then is disable as suggested

in Nakano into Dailey since both of the system directing to distributing periodic tasks and Nakano address the need of setting periodic tasks of the group to run predetermined of times and disable would improved the integrity of Dailey's system by reducing the overhead required to control the wakeup and sleep of process when scheduling periodic process (Nakano, col. 4, lines 38-44).

18. As per claim 21, Dailey further teaches configuring at least one set of services associated with that periodic event in a continuous mode in which the service is enable and executed continuously (paragraphs [0028], [0031], [0032], the task manager set the bit variable associated with processing task A, and then perform the task without interrupt (continuously) and a determination is made to determine whether the task is complete before reset the service variable to move to the next task)..

19. As per claims 12, and 20, they are rejected for the same reason as claims 4 above.

### ***Response to Arguments***

20. Applicant's arguments filed 08/12/2009 have been fully considered but they are not persuasive.

21. In the remark applicant argued that (1) Dailey fail to teach determining, for each of the set of services associated with that periodic event if that service is enabled for

execution, and (2) Dailey fail to teach configuring at least one set of services associated with that periodic event in a one-shot mode in which the service is enable for execution one time and then disable.

22. Examiner respectfully disagreed with applicant.

As to point (1), according to the MPEP (2111 [R5] Claim Interpretation) which allow examiner to interpret the claimed limitation as broadest reasonable interpretation as it would be interpreted by one of an ordinary skill in the art, as such, examiner interpreted the claimed limitation as determining, for each of the set of tasks associated with that periodic event if that task is ready/set for execution. Accordingly, Dailey teaches determining, for each of the set of tasks associated with that periodic event if that task is ready/set for execution (paragraphs [0028]-[0031], [0034], service variable 59 had more than one bits, wherein each bit is associated with a task as its execution trigger, thus when the periodic event occurs, based on the bit associated with the task, the task manager determining which task is set for execution). In addition, the claimed limitation did not specifically recite what condition or how the task being enabled (another word how the enabling mechanism perform). Thus, by setting the bits of the service variable 59, wherein each of the bit if the service variable 59 associated with a task as its execution trigger, Dailey enabling/setting the task for execution. Examiner advises applicant to amend the claim limitation to clarify that the enabling/setting the bits of claimed invention are distinct from Dailey.

As to point (2), applicant argued that Dailey fail to teach configuring at least one set of services associated with that periodic event in a one-shot mode in which the service is enable for execution one time and then disable based on the argument of point (1), which is Dailey fail to include the enabling mechanism. Based on the response to point (1) above, examiner conclude that Dailey setting bits as executing trigger for the tasks is the same as enabling the tasks for executing. Dailey disclosed setting a execution trigger in a service variable at a predetermined time interval, and task manager based on the service variable enable only one task of a set of processing tasks to perform at each interval (paragraphs [0005], [0035], page 5, claim 14). It would have been obvious to one of an ordinary skill in the art at the time the invention was made to have recognized that Dailey indirectly configuring (setting) at least one of set services (one task of a set of processing task) to perform only one time in the predetermined interval is obvious as configuring at least one set of services associated with that periodic event in a one-shot mode in which the service is enable for execution one time of the claimed invention. In addition, since the task only allow to perform one per interval, thus after the interval is reached, it would have been obvious for the task to disable. Therefore, it would have been motivated to one of an ordinary skill in the art at the time the invention was made to use the teaching of Dailey to distribute periodic task workloads in such a way that allow the system to process other processing work such as real-time tasks (Dailey, paragraph [0009]. In addition, examiner noted that applicant argued that Dailey tasks are periodic tasks (see remark, page 12, lines 1-2). Examiner

respectful disagreed with applicant. Dailey's tasks including periodic task and other processing tasks (see paragraph [0031], [0034], [0036]).

***Conclusion***

23. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

24. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jennifer N. To whose telephone number is (571) 272-7212. The examiner can normally be reached on M-T 6AM- 3:30 PM, F 6AM- 2:30 PM.

25. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Meng-Ai An can be reached on (571) 272-3756. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

26. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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Supervisory Patent Examiner, Art Unit 2195

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